

- (a) integrating a vector into the genome of one or more eukaryotic cells, wherein said vector integration activates expression of an endogenous gene in said one or more cells;
- (b) culturing said one or more cells under conditions favoring expression of said activated gene, thereby producing a gene product of said activated gene;
- (c) screening said one or more cells for a cell in which a desired gene is activated or for a cell in which a desired phenotype is induced by said activated gene;
- (d) treating said cell, in which said desired gene is activated or in which said desired phenotype is induced, with one or more test compounds to be screened for drug activity; and
- (e) determining the ability of said one or more test compounds to interact with a product of said desired activated gene or to affect said desired phenotype.

63. (New) A method for drug discovery comprising:

- (a) integrating a vector into the genome of one or more eukaryotic cells, wherein said vector integration activates expression of an endogenous gene in said one or more cells;
- (b) culturing said one or more cells in reduced-serum cell culture medium under conditions favoring production of a protein encoded by said activated gene and secretion of said protein into the cell culture medium;
- (c) screening said one or more cells for a cell in which a desired gene is activated and the protein encoded by said desired gene is secreted into the cell culture medium; and
- (d) screening one or more test compounds for drug activity by determining the ability of said test compounds to interact with said secreted protein in said cell culture medium.

64. (New) The method of claim 63, further comprising concentrating said cell culture medium prior to said screening in (d).

65. (New) The method of claim 63, further comprising isolating said protein prior to said screening in (d).

66. (New) The method of claim 62 wherein said vector comprises a transcriptional regulatory sequence and wherein expression of said endogenous gene is activated by means of said transcriptional regulatory sequence.

67. (New) The method of claim 63 wherein said vector comprises a transcriptional regulatory sequence and wherein expression of said endogenous gene is activated by means of said transcriptional regulatory sequence.

68. (New) The method of any of claims 62–67 wherein said vector integrates into the genome by non-homologous recombination.